

ABSTRACT OF THE DISCLOSURE

In an internal combustion engine, an amount of spray attaching onto an inner wall surface of an intake pipe is reduced by forming two-directional spray of highly atomized 5 fuel. The highly atomized two-directional spray can be obtained by a spray forming means which is constructed by piling a fuel in-plate 13 forming fuel passages, a swirl plate 14 forming fuel passage for adding swirl forces to the fuel, and an injection plate 15 for determining 10 injection directions of the fuel. Further, penetrations of the sprays injected toward two directions are made different from each other.